

This listing will replace all prior versions of claims in the application:

Listing of Claims

1. (Original) An insulated barrier comprising:

- (a) a first substantially gas impermeable rigid wall;
 - (b) a second substantially gas impermeable rigid wall;
 - (c) adjoining portions between said first and second walls that create an entirely closed and substantially hermetically sealed structure; and
 - (d) a core material between the walls that supports the walls of the structure, comprising a substantially open-cell structure or composition;
- wherein said core material is formed *in situ* within said structure.

2. (Currently Amended) An insulated barrier comprising:

- (a) a first substantially gas impermeable rigid wall;
 - (b) a second substantially gas impermeable rigid wall;
 - (c) adjoining portions between said first and second walls that create an entirely closed and substantially hermetically sealed structure; and
 - (d) a core material between the walls that supports the walls of the structure, comprising a substantially open-cell structure or composition;
- wherein said core material is formed *in situ* within said structure; and
- wherein said first substantially gas impermeable rigid wall, said second substantially gas impermeable rigid wall, and said adjoining portions comprise a plastic coated with a metal oxide coating.

3. (Currently Amended) An insulated barrier comprising:

- (a) a first substantially gas impermeable rigid wall;
- (b) a second substantially gas impermeable rigid wall;

(c) adjoining portions between said first and second walls that create an entirely closed and substantially hermetically sealed structure; and

(d) a core material between the walls that supports the walls of the structure comprising a substantially closed-cell structure or composition;

wherein said core material is formed *in situ* within said structure; and

wherein said first substantially gas impermeable rigid wall, said second substantially gas impermeable rigid wall, and said adjoining portions comprise a plastic coated with a metal oxide coating; and

wherein said closed-cell structure or composition is a powder or granular, provided that said closed-cell structure or composition is not foam glass.

4. (Original) The insulated barrier according to claims 2 or 3, wherein said metal oxide is a silicon oxide.

5. (Original) The insulated barrier according to any one of claims 1-3, further comprising a port through which a vacuum may be drawn.

6. (Original) The insulated barrier according to any one of claims 1-3, further comprising a vacuum breach sensor within the insulated barrier that detects atmospheric oxygen.

7. (Original) The insulated barrier according to claim 5, further comprising a vacuum breach sensor within the insulated barrier that detects atmospheric oxygen.

8. (Original) The insulated barrier according to claim 6, wherein said vacuum breach sensor comprises a nonaqueous ionic liquid and an indicator.

9. (Original) The insulated barrier according to claim 7, wherein said vacuum breach sensor comprises a nonaqueous ionic liquid and an indicator.

10. (Original) The insulated barrier according to claim 1, wherein said first and second walls, and said adjoining portions, comprise a composite of an organic substrate coated with an inorganic matrix.

11. (Original) The insulated barrier according to claim 10, wherein said organic substrate is plastic.

12. (Original) The insulated barrier according to claim 10 or 11, wherein said inorganic matrix is a metal oxide.

13. (Original) The insulated barrier according to claim 12, wherein said metal oxide is a silicon oxide.

14. (Original) The insulated barrier according to claim 10, wherein the organic substrate portion of said composite comprises the outside surface of said barrier.

15. (Original) The insulated barrier according to claims 1 or 2, wherein said core material is a small pore area material.

16. (Original) The insulated barrier according to claim 15, wherein said small pore area material is an organic, small pore area material.

17. (Original) The insulated barrier according to claim 15, wherein said small pore area material is a low density microcellular material.

18. (Original) The insulated barrier according to claim 16, wherein said organic, small pore area material is a low density microcellular material.

19. (Original) The insulated barrier according to claim 17, wherein said low density microcellular material is an aerogel.

20. (Original) The insulated barrier according to claim 18, wherein said low density microcellular material is an aerogel.

21. (Original) The insulated barrier according to any one of claims 1-3, wherein said core material has a thin film form.

22. (Original) The insulated barrier according to claim any one of claims 1-3, wherein said core material has a granular form.

23. (Original) The insulated barrier according to claim any one of claims 1-3, wherein said core material has a monolithic form.

24 -37. (Canceled)